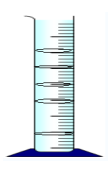
1. Something is a liquid if it is
2. Above its freezing point and below its boiling point
3. Circle the following that are chemical changes. Underline the following that are physical changes.

Oxidizes; Conducts; Magnetic ; Cracks; Insulates; Produces a gas;

Dissolves; Combusts; Melts; Dougies – the chemical energy for dougying is obtained through digestion

|  |  |
| --- | --- |
| Density | Letter |
| 1.82 | E |
| .93 | A |
| 1.55 | D |
| 1.52 | C |
| 1.0 | B |

1. The following chemicals are floating in this graduated cylinder. Identify which chemical is in which place.

A

B

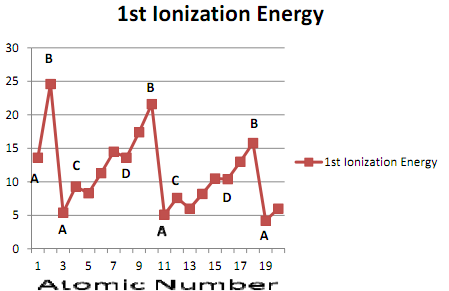
C

D

E

1. Circle the intensive physical properties. Underline the extensive physical properties.

Shape; Mass; Color; Density; Solubility; Length; Volume

1. Which process (distillation, filtration, or evaporation) would you use to separate
   1. Water from alcohol 🡪 Distillation
   2. Salt from water 🡪 Evaporation
   3. Rocks from dirt 🡪 Filtration
2. Define each of the processes from #6
   1. Distillation – using boiling points to separate mixtures
   2. Evaporation 🡪 boiling away one liquid to separate a solid
   3. Filtration 🡪 Separating solids by particle size
3. Define inert 🡪 does not react
4. What do noble gas elements have that makes them not want to react with other elements? Full outer energy orbits
5. What are the names of the first and last two families on the periodic table? Alkili, Alkiline earth elements, Halogens, Noble gasses
6. Phosphorus would have how many electrons in its highest s sublevel? How many in its highest p sublevel? 2/3
7. The radius of an atom gets bigger as it goes down and to the (left/right)? Left
8. Elements with the highest first ionization energy want to keep their electrons the most. So which family would be the B on this chart? Noble Gases
9. (Families/periods) also known as groups

have similar Chemical & physical properties.

1. Thomson discovered the electron (a subatomic

Particle), so which part of Dalton’s Atomic

theory was wrong in light of this discovery?

* 1. All elements are made up of tiny indivisible particles called atoms
  2. Atoms of the same element are identical.
  3. Atoms of different elements chemically combine to form chemical compounds
  4. During chemical reactions, atoms are rearranged.

1. We know that electrons in atoms have specific levels of energy because specific wavelengths of light are emitted from excited atoms. True or False? True
2. An element with two isotopes has the following masses and relative abundances. What is the average atomic mass?

|  |  |
| --- | --- |
| Relative Abundance | Mass (amu) |
| 43.91% | 50.03 |
| 56.09% | 52.34 |

1. Electron configurations can be written starting from a noble gas. Titanium would be [Ar]4s23d2 or [Ar]4s24d2?
2. What is the Lewis structure of Oxygen? O with 6 dots
3. What element is represented by the electron configuration 1s22s22p63s23p2? Silicon
4. Match the radiation with the thing that makes it up (Electron, Helium Nucleus, or Energy). Alpha = Helium Nucleus, Beta = Electron, and Gamma= Pure energy.
5. In the Nuclear decay reaction. X. What chemical symbol should the x be replaced with? Rn
6. IN the Nuclear decay reaction X +  what should be in the place of the x?

 or ? The He one

1. Name the following: Fe3P2; HBr; CaCl2; & KMnO4 Iron (II) Phosphide Calcium Chloride, Potassium Permanganate.
2. Write the formula for the following: Sodium Nitrate, & Tricarbon Dibromide NaNO3, C3Br2
3. An Ionic compound can be identified by finding one ion from the (left/right) of the periodic table and one from the (left/right) of the periodic table. Left/right
4. Something about lewis dot structures with double bonds. All elements are trying to get to 8 electrons so they need 8 dots (or a stick can count for 2), except Hydrogen which wants 2.
5. What is the molecular geometry of NI3 and NO2 Trigonal Planar, Linear
6. In a chemical equation that is balanced, the same number of atoms is on both sides. True or False? True
7. What are the correct coefficients for the equation NaCl 🡪 Na + Cl2?
   1. 1, 1, 1
   2. 2, 2, 1
   3. 2, 2, 2